# Adult opinions about the age at which children can be left home alone, bathe alone, or bike alone: Second Injury Control and Risk Survey (ICARIS-2)★,,★★,,★

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## Abstract

**Problem**—This study describes adult opinions about child supervision during various activities.

**Methods**—Data come from a survey of U.S. adults. Respondents were asked the minimum age a child could safely: stay home alone; bathe alone; or ride a bike alone. Respondents with children were asked if their child had ever been allowed to: play outside alone; play in a room at home for more than 10minutes alone; bathe with another child; or bathe alone.

**Results**—The mean age that adults believed a child could be home alone was 13.0years (95% CI=12.9–13.1), bathe alone was 7.5years (95% CI=7.4–7.6), or bike alone was 10.1years (95% CI= 10.0–10.3). There were significant differences by income, education, and race.

**Discussion**—Assessing adult's understanding of the appropriate age for independent action helps set a context for providing guidance on parental supervision. Guidelines for parents should acknowledge social norms and child development stages.

**Impact on Industry**—Knowledge of social norms can help guide injury prevention messages for parents.

## Keywords

injury; prevention; children; supervision; social norms

## 1. Problem

Unintentional injuries are the leading cause of death among children over age one in the United States (CDC National Center for Injury Prevention and Control, 2012; Gilchrist, Ballesteros, & Parker, 2012). Supervision of children is widely considered a critical factor in

injury prevention, yet it is poorly understood (Mack, Sogolow, Strouse, & Lipman, 2008; Petrass, Blitvich, & Finch, 2009; Saluja et al., 2004). Moreover, there is limited research that explores the nature of the transition period when children move from being supervised to participating in activities without adult supervision. There are few guidelines offered to parents for these milestone stages and we don't yet know what parent expectations are as to timing of transitions to unsupervised activities. We know that these expectations, or social norms, play a role in developing values related to risk taking (Mercy, Mack, & Steenkamp, 2007). To our knowledge, this is the first nationally representative study of parents' and non-parents' opinions about the age at which a typical child can safely be home, bathe, or bike alone.

## 2. Methods

The Second Injury Control and Risk Survey (ICARIS-2) Phase-2 was conducted from March 2007–May 2008. ICARIS-2 Phase-2 was a cross-sectional, list-assisted random-digit-dial telephone survey of U.S. English or Spanish speaking adults aged 18 and older. The survey collected data on injury topics such as child supervision, traumatic brain injury, aggression, and suicidal ideation (Klevens, Simon, & Chen, 2012). Respondent demographic data (e.g., age, education) and household-level data (e.g., income) and data on the sex and age of all persons living in the household were also collected. Racial and ethnic minorities were over-sampled. Data were weighted to adjust for the complex sample design, non-response, and non-coverage. The protocol was approved by the Centers for Disease Control and Prevention's Institutional Review Board.

Respondents (n=3,024) were asked to think about a typical child and suggest the minimum age a child could safely: be left alone in their house without an adult; take a bath without an adult in the room; or ride a bike in a low traffic area without an adult outside. Respondents who reported currently having children aged 1–10years in their household (n=655) were also asked if the child had ever been allowed to: play outside for more than 10minutes without an adult outside; play in a room in the house for more than 10minutes without an adult in the room; be in the bathtub with another child without an adult present in the room; or be in a bathtub alone. All analyses, including t-tests for significant differences, were conducted using software that accounted for the complex survey design, SAS version 9.2 (SAS Institute Inc).

## 3. Results

Overall the mean age that adults believed a child could be safely home alone was 13.0years, bathe alone was 7.5years, or bike alone was 10.1years (Table 1). There were significant differences in opinions by respondent race, age group, income, and education. For example, white respondents reported a significantly younger mean age for all three activities than Hispanic or African American respondents.

There were differences of opinion between respondents with and without children aged 1–10years living in their households (data not shown). Those with children reported a significantly younger mean age for being home alone (12.7years) than those without children (13.1years). However, those with children reported a significantly older mean age

for biking alone (10.6years) than those without children (9.9years). There was not a significant difference between parents (7.4years) and adults without children (7.5years) on the opinion of when a child can bathe alone. Around the topic of bathing, opinion and practice were consistent (Table 2). Respondents with children reported the average age a typical child could bathe alone at 7.4years; these respondents also reported their own child was allowed to bathe alone at 7.1years for boys and 6.7years for girls. There were not significant differences between boys and girls in the average age they were allowed to play outside alone, bathe alone, or bath alone with another child.

## 4. Discussion

There are many milestone development charts indicating a general activity and the expected age the child should be able to do a certain task (e.g., smile at 6weeks). Especially at the youngest ages, parents often track milestone developments tied to a particular age and discuss these markers with physicians (Oberklaid & Drever, 2011). There is less direct guidance on activities for children in the pre-teen years. Moving into the teen years, laws take over as milestone markers (e.g., a driver's license at age 16). Parents may look for outside guidance as to the appropriate age to let a pre-teen participate in activities without supervision, although appropriate and practical supervision needs to consider the child's developmental age, activity, and the risk of the setting (Petrass et al., 2009; Saluja et al., 2004). Assessing social norms, or adult opinions about the appropriate age for independent action, helps set a context for providing guidance on parental supervision. For example, our finding that the mean age adults believed a child could safely be left home alone (13years) was at the higher end of the Safe Kids USA recommendation of 12–13years, and was above the American Academy of Pediatrics (AAP) recommendation of at least 4th or 5th grade (10–11years old; Harris, 2010; Safe Kids USA). Four states specify an age in years at which a child can be left home alone (IL=14years, MD=8years, NC=8years, OR= 10years), while another nine states proffer a suggested guideline (8–12years); however, the majority of states do not define a legal age. Our finding that the mean age adults believed a child could safely bathe alone (7.5years) was also above the AAP recommendation that children <5 never be unsupervised in a bathtub (American Academy of Pediatrics, 2003), but similar to the finding by Porter et al. (2007; 6.7years) in a study among Colorado residents (Porter et al.).

Barton and Schwebel (2007) found that children aged 7–8years were more likely than younger children to be able to consider simultaneously the speed, distance, and acceleration of multiple vehicles from multiple directions. A study by Soori and Bhopal (2002) in England found that among parents of elementary school children aged 7-and 9-years-old, parents thought an 8-year-old could ride a bicycle alone on a low-traffic street and that a 12-year-old could ride a bicycle alone on a busy road. We found that respondents with children reported a typical child should be able to safely ride a bike alone in a low traffic area when they are 10.6years old. Respondents without children reported 9.9years, a statistically significant, though perhaps not meaningful difference.

The finding in our study regarding the reported mean age of when children are allowed to play outside alone at 7years is consistent with the Soori and Bhopal (2002) study where

70.8% of parents reported allowing their 7year old child to play outside alone. Our finding appears to be substantially younger, however, than Kalish, Banco, Burke, and Lapidus (2010) where only 30% of Connecticut parents thought a girl age 10–14years could play outside by herself, and 33% thought a boy in this age range could play outside alone. Our results also did not show significant differences in average age between boys and girls in any of the four activities asked of parents.

This study has certain limitations. First, the response rate was 52.2% for ICARIS-2 Phase-2. Changes in telecommunications have increased non-contact rates for telephone surveys in general and our sampling methods excluded individuals without landlines, who are more likely to be young and male. These factors do not appear to have major implications for study outcomes (Lee, Brick, Brown, & Grant, 2010). Second, comparisons to Census files indicated that respondents were representative of the U.S. population with respect to demographic factors including race/ethnicity, age, and gender (Battelle, 2005), however, respondents were slightly more likely to be married, highly educated, and to own their own homes compared with the general population. These differences were less than 10%.

## 5. Summary

Morrongiello, Corbett, and Kane (2011) note a declining development progression in direct supervision as a child ages. The crux of this decline for parents is matching supervision level to activities to allow for both independence and safe growth. Based on our results, adults on average report that a child can safely be left home alone around age 13, bike alone in a low traffic area around age 10, and bathe alone around age 7½. These age milestones were generally agreed upon among males and females, and across age groups. Opinions varied, however, by income, education, and race/ethnicity. Knowledge of these age norms and group differences can provide guidance for educational materials targeting a particular activity. For example, our results showed that social norms for bathing and being home alone were generally older than the guidelines developed by child injury prevention advocates and some state laws. Given this finding, advocates could place a lower emphasis on age, and a greater emphasis on the risk setting when developing and promoting educational materials.

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## Biographies

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**Table 1**

Opinions of adults (n=3,024) for the age when a typical child can be left home alone, bathe alone, or bike alone, 2007–2008.

| Respondent characteristic | Mean Age in Years (95% CI) | | |
| --- | --- | --- | --- |
| | Be home alone | Bathe alone | Bike alone |
| **Overall** | 13.0(12.9–13.1) | 7.5(7.4–7.6) | 10.1(10.0–10.3) |
| **Gender** | | | |
| Male+ | 13.0(12.8–13.1) | 7.6(7.5–7.8) | 9.9(9.8–10.1) |
| Female | 13.0(12.9–13.1) | 7.4(7.2–7.5) | 10.3(10.1–10.5) |
| **Age group** | | | |
| 18–24+ | 12.9(12.5–13.4) | 8.0(7.6–8.5) | 10.6(10.0–11.1) |
| 25–34 | 12.8(12.5–13.0) | 7.3(7.0–7.6) | 10.2(9.9–10.6) |
| 35–44 | 12.8(12.6–13.0) | 7.3(7.1–7.6) | 10.4(10.0–10.7) |
| 45–54 | 13.0(12.8–13.3) | 7.4(7.2–7.6) | 10.1(9.8–10.4) |
| 55–64 | 12.9(12.7–13.1) | 7.2(7.0–7.4)* | 9.5(9.2–9.8)* |
| 65–74 | 12.8(12.5–13.1) | 7.4(7.0–7.8) | 9.6(9.1–10.0) |
| 75+ | 13.4(13.1–13.7) | 7.5(7.1–7.8) | 9.9(9.5–10.3) |
| **Number of children** | | | |
| 0+ | 13.0(12.9–13.1) | 7.5(7.3–7.6)) | 9.8(9.7–10.0) |
| 1 | 13.1(12.8–13.4) | 7.8(7.5–8.2) | 10.7(10.3–11.1)* |
| 2 | 12.8(12.5–13.1) | 7.3(7.0–7.5) | 10.3(9.9–10.7) |
| 3–8 | 12.9(12.6–13.2) | 7.6(7.2–7.9) | 10.5(10.1–10.9)* |
| **Income** | | | |
| <$10,000+ | 13.9(13.5–14.3) | 8.4(7.9–8.9) | 11.1(10.6–11.6) |
| $10,000<$20,000 | 13.4(13.1–13.8) | 8.1(7.7–8.6) | 10.6(10.2–11.1) |
| $20,000<$35,000 | 13.2(12.9–13.5) | 7.5(7.2–7.8)* | 10.5(10.2–10.9) |
| $35,000<$50,000 | 12.9(12.7–13.2)* | 7.3(7.0–7.5)* | 10.1(9.7–10.4)* |
| $50,000 | 12.7(12.5–12.8)* | 7.3(7.1–7.4)* | 9.8(9.6–10.0)* |
| **Education** | | | |
| <High School+ | 13.7(13.2–14.1) | 8.4(8.0–8.8) | 11.1(10.7–11.5) |
| High School | 13.4(13.2–13.6) | 7.5(7.3–7.8)* | 10.5(10.2–10.8) |
| Some college | 12.9(12.7–13.2) | 7.4(7.2–7.7)* | 10.1(9.8–10.4)* |
| College degree | 12.6(12.5–12.8)* | 7.2(7.0–7.4)* | 9.7(9.5–10.0)* |
| Post graduate degree | 12.4(12.2–12.6)* | 7.4(7.1–7.6)* | 9.5(9.2–9.8)* |
| **Race** | | | |
| White+ | 12.8(12.7–12.9) | 7.2(7.1–7.3) | 9.7(9.6–9.9) |
| African American | 13.7(13.4–14.0)* | 8.0(7.7–8.4)* | 11.0(10.6–11.4)* |
| Hispanic | 13.5(13.1–13.8)* | 8.2(7.9–8.6)* | 11.1(10.7–11.6)* |
| Other | 12.6(12.1–13.1) | 7.7(7.2–8.2) | 10.6(9.9–11.3) |

‡Referent group.

*
p<0.05.

**Table 2**

Mean ages of children aged 1–10years who were allowed to play outside alone, play inside alone, or bathe alone (or with another child), by gender of child, 2007–2008.

| | Boys | Girls |
|---|---|---|
| **Task** | *Mean age in years (95% CI)* | |
| Play outside alone | 7.1(6.5–7.7) | 6.7(6.0–7.5) |
| Play inside alone | 5.9(5.4–6.4) | 5.5(5.0–5.9) |
| Bathe alone or with another child | 5.0(4.2–5.7) | 5.1(4.2–6.0) |
| Bathe alone | 7.1(6.6–7.6) | 6.8(6.1–7.4) |